

Epidemiology

- **Human** disease is caused by influenza A or influenza B
- Ongoing minor antigenic changes require yearly vaccination in the fall
- Knowing the currently circulating strain aids in decisions regarding antiviral treatment and prophylaxis

Clinical Presentation

- High fever, chills, prostration, muscle aches, sore throat, coryza, cough; at times, also vomiting and diarrhea

Differential Diagnosis

- Febrile respiratory illnesses such as bacterial pneumonia, mycoplasma, adenovirus, avian influenza (e.g. influenza A H5N1), and SARS

Laboratory

- Rapid testing of nasopharyngeal swabs for influenza
- Consider NP swab for respiratory viral culture (if it is positive, it allows for further typing of isolate)
- Do not order routine viral **culture** if avian influenza is suspected

Infection control

- Droplet precautions (mask within 3-6 feet)
- Routine standard precautions and good hand washing before & after patient contact

Treatment & Prophylaxis

- Antivirals shorten the course of illness when given within the first 1-2 days of influenza symptoms
- CDC recommends against the use of amantadine & rimantadine for the 2008-2009 season

	Oseltamivir (Tamiflu®)	Zanamivir (Relenza®)
Effective for both Influenza A & B	Yes	Yes
Mode	Oral	Inhaled
Treatment	≥ 1 y.o.	≥ 7 y.o.
Prophylaxis	≥ 1 y.o.	≥ 5 y.o.

Follow CDC's vaccine recommendations for ages & contraindications

- Don't use smaller vaccine doses than recommended
- Use Live Attenuated Influenza Vaccine (LAIV; Flumist™) only in healthy people ages 2 years-49 years
- Persons receiving LAIV should avoid close contact with severely immunosuppressed people for 7 days
- Contraindications to inactivated influenza vaccine or LAIV
 - Anaphylactic allergy to eggs
 - Guillain-Barré syndrome during the 6 weeks following a previous influenza vaccine
- Don't prescribe Oseltamivir or Zanamivir for 2 weeks after LAIV
- Stop Oseltamivir or Zanamivir for at least 2 days before giving LAIV

Influenza Vaccine Recommendations for 2008-2009 season

Inactivated intramuscular shot [Multiple manufacturers]:

- 1) Ages \geq 50 y.o.
- 2) All children ages 6 months-18 years old
- 3) Household contacts and caregivers of children 0-59 months as well as persons at high risk of complications from influenza
- 4) All persons with chronic medical conditions (e.g. heart disease, lung disease, asthma, diabetes, kidney disease, HIV, immunosuppression).
- 5) Pregnant in any trimester during influenza season.
- 6) Children age 6 months-18 years old on chronic aspirin therapy.
- 7) All health care workers
- 8) Residents of any age in a nursing home or chronic care facility.
- 9) Patients with any condition that can compromise respiratory function, handling of respiratory secretions, or can increase risk of aspiration.
- 10) **Anyone** wishing to reduce their risk of influenza.

Live attenuated influenza vaccine (LAIV) [Flumist™]:

- Healthy, nonpregnant people ages 2 y.o. through 49 y.o., including close contacts of infants and most health care workers

Pediatric pointers

- Children ages 6 months-8 years old receiving any influenza vaccine for the first time need two doses of vaccine.
 - The two doses should be spaced \geq 4 weeks apart
- Notify local or county health department for pediatric influenza deaths.

Staphylococcal and MRSA disease associated with influenza

- MRSA is becoming a community-acquired infection and has been associated with severe disease following influenza
- Influenza increases risk of *Staphylococcus aureus* respiratory infection
- Physicians caring for patients who have influenza and worsening respiratory status requiring IV antibiotics should consider adding **vancomycin** for staphylococcal coverage until culture results are available and/or clinical improvement occurs
- Many oral antibiotics do not cover MRSA
- Oral antibiotics that may be effective against MRSA
 - Clindamycin (Also good against *Streptococcus pneumoniae*)
 - Trimethoprim-sulfamethoxazole
 - Poor for *S. pneumoniae* which also complicates influenza
 - Avoid in pregnancy

For More Information

- ADHS website at www.azdhs.gov/phs/immun/providersflu.htm
- Centers for Disease Control and Prevention website at www.cdc.gov/flu
- MMWR August 8, 2008. "Prevention and Control of Influenza" at www.cdc.gov/mmwr/PDF/rr/rr5707.pdf
- ADHS Hotline for the Public (Recorded message):
Metro Phoenix 602-364-4500; Statewide 1-800-314-9243
- Clinics giving influenza vaccines can be found at www.cir.org,
(602) 263-8856, or (800) 352-3792 (for area codes 520 & 928)